

DOCKER

Student Name	David
Maximum Marks	2 Marks

Question-1:

pull an image from docker hub and run it in docker playground.

pull an image form docker hub

```
Command Prompt
Microsoft Windows [Version 10.0.19044.1766]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ADMIN>docker push shabariganesan/docker_with_flask_form
Using default tag: latest
The push refers to repository [docker.io/shabariganesan/docker_with_flask_form]
An image does not exist locally with the tag: shabariganesan/docker_with_flask_form

C:\Users\ADMIN>docker pull shabariganesan/docker_with_flask_form
Using default tag: latest
latest: Pulling from shabariganesan/docker_with_flask_form
1671565cc8df: Pull complete
3e94d13e55e7: Pull complete
fa9c7528c685: Pull complete
53ad072f9cd1: Pull complete
d6b983117533: Pull complete
d8092d56ded5: Pull complete
c71afc637d59: Pull complete
864a10b3c704: Pull complete
4334b2fe8293: Pull complete
8944570703f4: Pull complete
f885911288d0: Pull complete
086f369ca59f: Pull complete
e113bd27b88e: Pull complete
Digest: sha256:c61f28873bf1c909786ce991b8b60cd976765077f344e34d50e6cce8cf8d95c3
Status: Downloaded newer image for shabariganesan/docker_with_flask_form:latest
docker.io/shabariganesan/docker_with_flask_form:latest

C:\Users\ADMIN>
```

run it in docker playground



Container Registry

Quick start

Namespaces

6

Repositories

2

Images

2

Trash

0

Settings



RetsosItsrls

Location

Tokyo



Search



Name



job_portal

jp.icr.io/ganesh/job/job_portal



docker_with_flask_form

jp.icr.io/newnamispace/docker_with_flask_fm

Items per page:

25



1-2 of 2 items



Containers



Images



Volumes

Dev Environments BETAExtensions BETA

Add Extensions

Containers [Give Feedback](#)

A container packages up code and its dependencies so the application runs in the same environment in another. [Learn more](#)

Showing 2 items

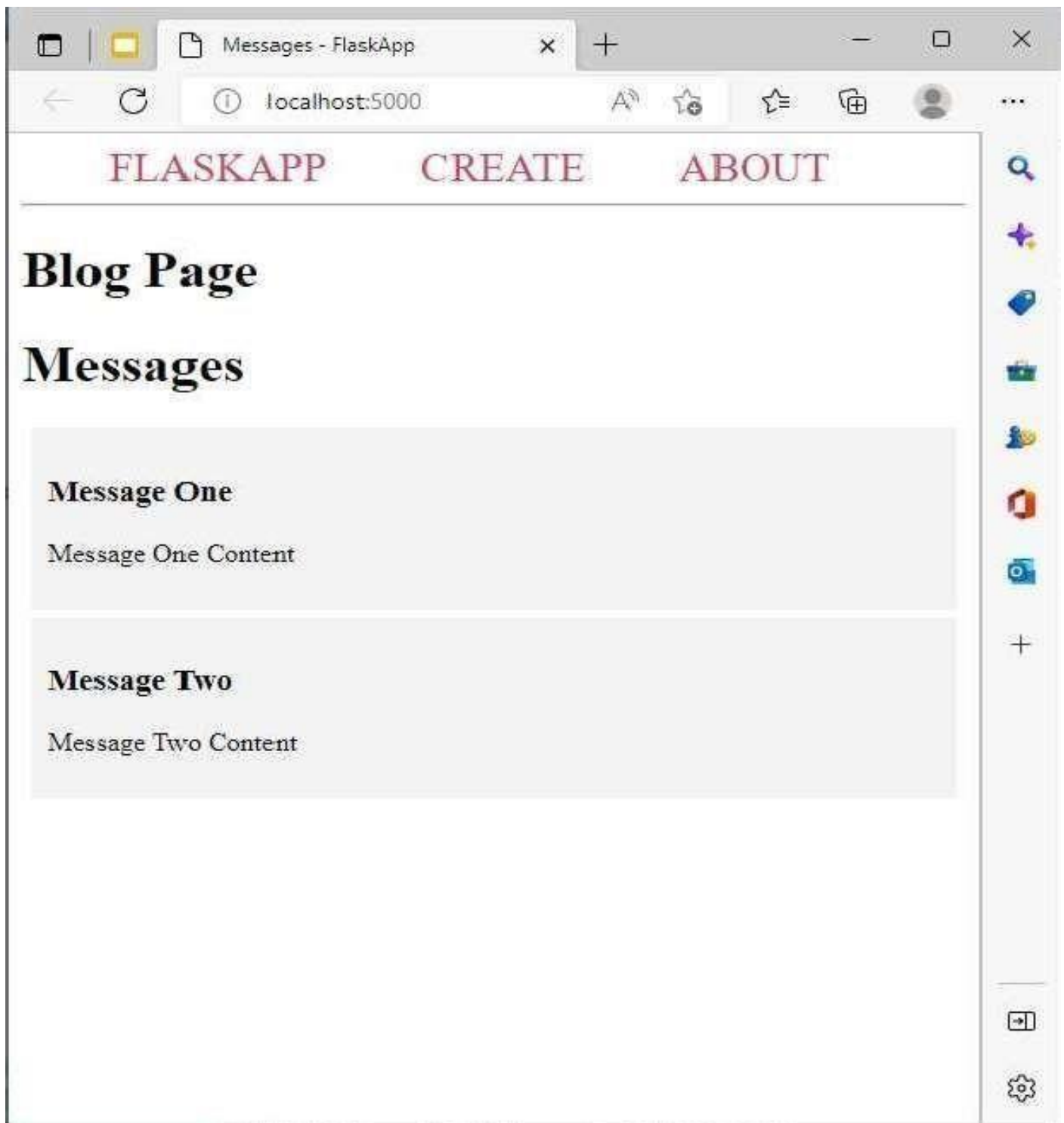
<input type="checkbox"/>		NAME	IMAGE	STATUS	
<input type="checkbox"/>		funny_shirley 8ee929159404	docker/get	Exited	8
<input type="checkbox"/>		determined_m cc3e98e68102	shabatigar	Running	5



RAM 2.86GB

CPU 9.39%

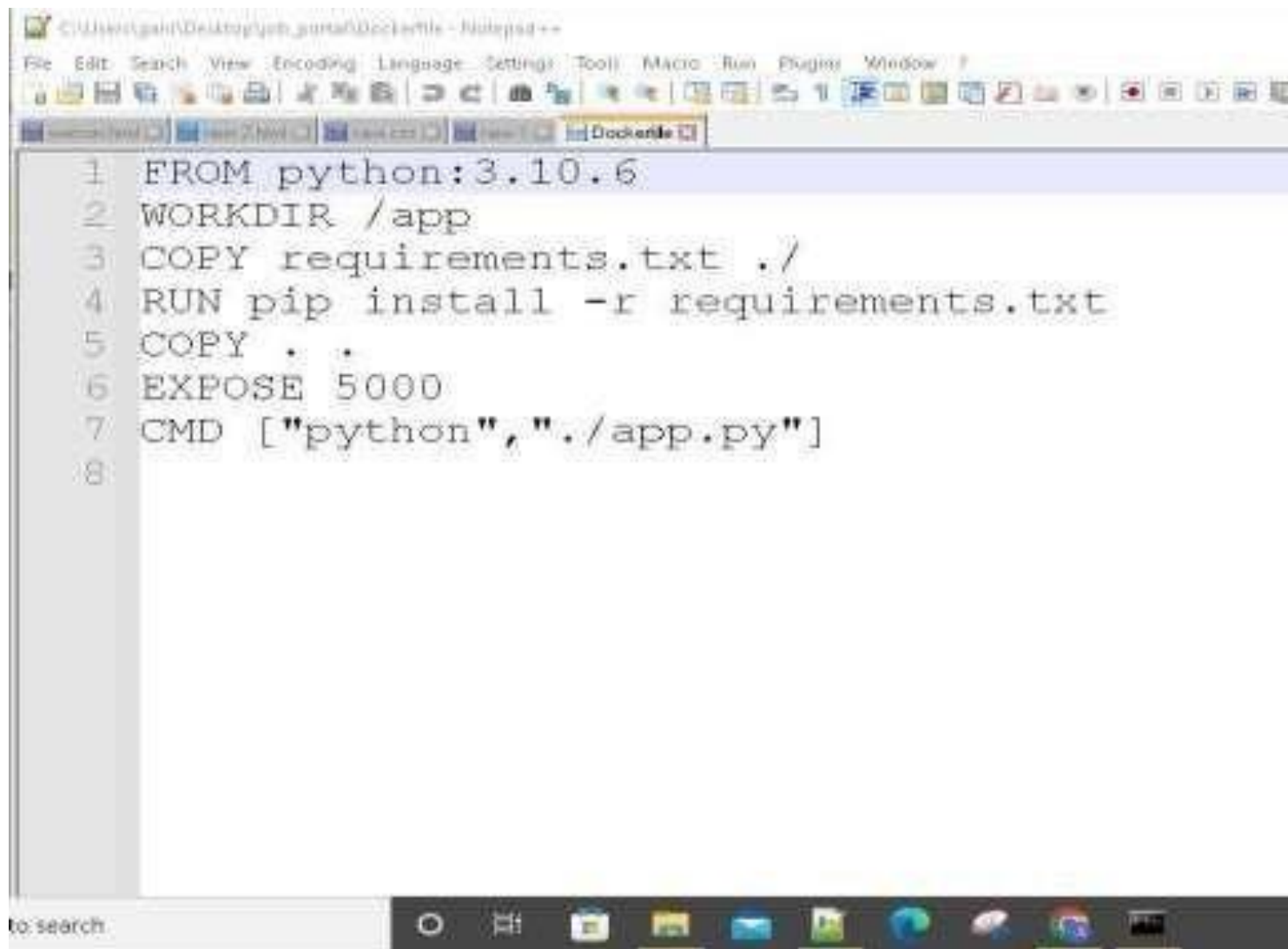
Connected to Hub



Question-2:

Create a docker file for the jobportal application and deploy it in docker application.

Creating a docker file for the jobportal application



```
1 FROM python:3.10.6
2 WORKDIR /app
3 COPY requirements.txt ./
4 RUN pip install -r requirements.txt
5 COPY . .
6 EXPOSE 5000
7 CMD ["python", "./app.py"]
8
```

deploy in in dokcer application

Select C:\Windows\System32\cmd.exe

```
C:\Users\geni\Desktop\job_portal>cd ..
```

```
C:\Users\geni\Desktop>cd job_portal
```

```
C:\Users\geni\Desktop\job_portal>docker build -t job_portal
```

"docker build" requires exactly 1 argument.

See 'docker build --help'.

Usage: docker build [OPTIONS] PATH | URL | -

Build an image from a Dockerfile

```
C:\Users\geni\Desktop\job_portal>dir
```

Volume in drive C has no label.

Volume Serial Number is 86A3-1B86

Directory of C:\User\geni\Desktop\job_portal

10/25/2022	04:53 PM	<DIR>	.
10/25/2022	04:53 PM	<DIR>	..
10/25/2022	04:11 PM		320 app.py
10/22/2022	10:48 PM		148 Dockerfile
10/22/2022	10:48 PM		5 requirements.txt
10/25/2022	04:53 PM	<DIR>	static
10/25/2022	04:53 PM	<DIR>	templates
10/25/2022	04:53 PM	<DIR>	__pycache__
		5 File(s)	474 bytes
		5 Dir(s)	77,847,934,976 bytes free

```
C:\Users\geni\Desktop\job_portal>docker build -t job_portal.
```

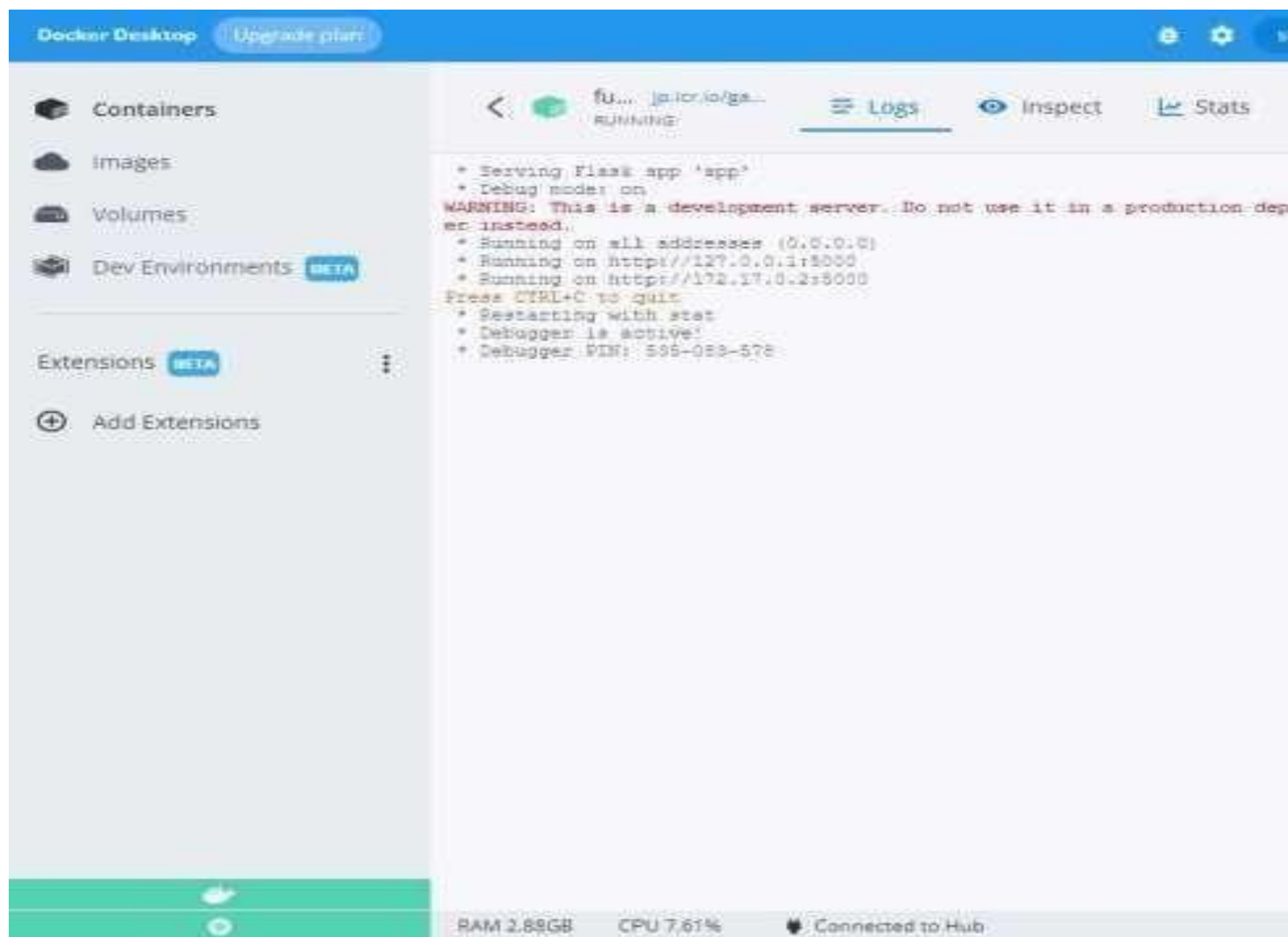
Invalid argument "job_portal." for "-t, --tag" flag: invalid reference format

See 'docker build --help'.

```
C:\Users\geni\Desktop\job_portal>docker build -t job_portal .
```

[+] Building 0s (11/11) FINISHED

```
> [internal] load build definition from Dockerfile
> -- transferring Dockerfile: 170B
> [internal] load .dockerignore
> -- transferring content: 3B
> [internal] load metadata for docker.io/library/python:3.9.13
> [auth] docker.io/library/python:3.9.13: pull access denied, repository does not exist or you do not have access
> [x] Pull docker.io/library/python:3.9.13: pull access denied, repository does not exist or you do not have access
> -- resolve docker.io/library/python:3.9.13: pull access denied, repository does not exist or you do not have access
```

Question-3:

**Create aIbm container registry and deploy helloworld app or
jobportalapp create a ibm container registry**



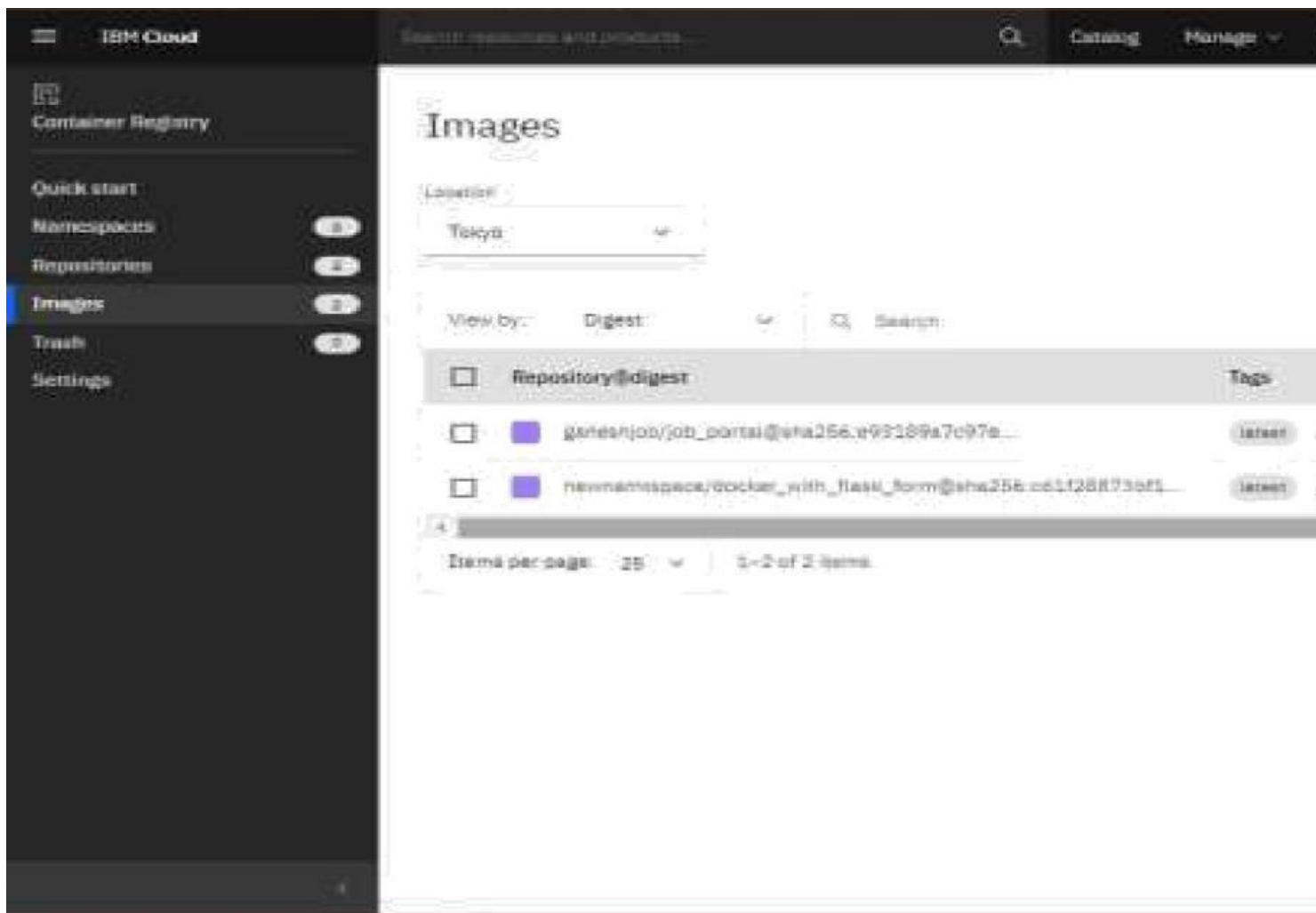
```

C:\Windows\system32\cmd.exe
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Retrying in 1 second
9ff6e4d6744: Waiting
a80d1d47b541: Waiting
055ed1b74428: Waiting
Failed to lookup host: jp.lcr.io

C:\Users\gan1\Desktop\job_portal>docker push jp.lcr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganeshjob/job_portal]
15e3b1584025: layer already exists
80e94fb5e186: Pushed
48c2a7a4c12b: layer already exists
9b72c7835466: layer already exists
bfcd6b8136e: layer already exists
1f123186824c: layer already exists
3d5eb1152931: Pushed
180796cdf3b1: Pushed
54acb5a6fa8b: Retrying in 1 second
8d51c618126f: Pushed
9ff6e4d6744: Pushed
a80d1d47b541: Pushed
055ed1b74428: Pushing [=====] 89.88MB/134MB
^C
C:\Users\gan1\Desktop\job_portal>docker push jp.lcr.io/ganeshjob/job_portal
Using default tag: latest
The push refers to repository [jp.lcr.io/ganeshjob/job_portal]
15e3b1584025: layer already exists
80e94fb5e186: layer already exists
48c2a7a4c12b: layer already exists
9b72c7835466: layer already exists
bfcd6b8136e: layer already exists
1f123186824c: layer already exists
3d5eb1152931: layer already exists
180796cdf3b1: layer already exists
54acb5a6fa8b: Pushed
8d51c618126f: layer already exists
9ff6e4d6744: layer already exists
a80d1d47b541: layer already exists
055ed1b74428: Pushed
latest: digest: sha256:e91189a7c970eb99086668a54e896cf61aa0eda909998c8c7a21a7a7961fc207 size: 3852

C:\Users\gan1\Desktop\job_portal>
C:\Users\gan1\Desktop\job_portal>

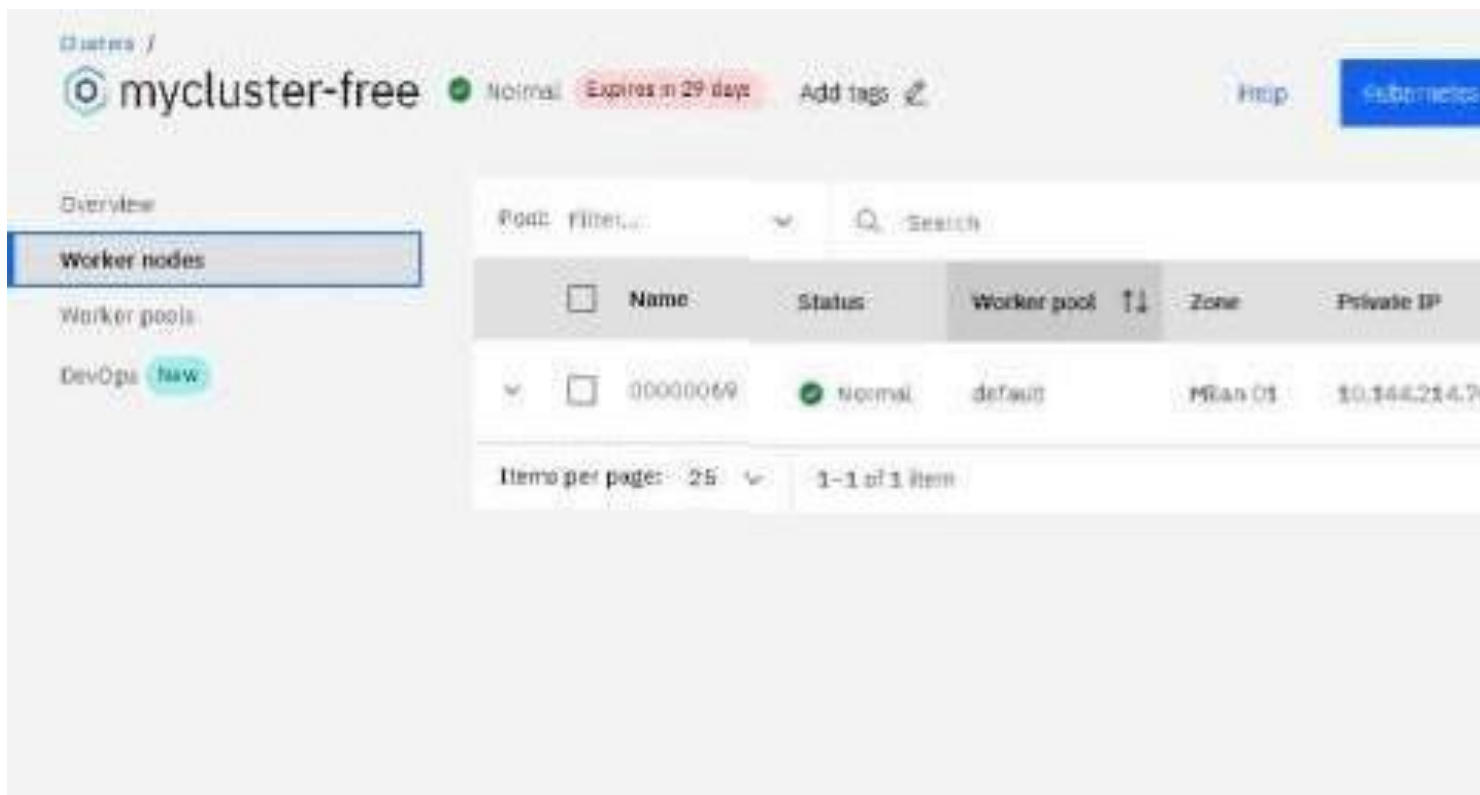
```



Question-4:

Create a kubernetes cluster in ibm cloud and deploy helloworld image or jobportal image and also expose the same app to run in noteport

Creating a kubernetes cluster in ibm cloud



deploy helloworld image or jobportal image and also expose the same app to run in noteport

```
Deploying Flask app 'app'
bug mode: on
[WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.]
Running on all addresses (0.0.0.0)
Running on http://127.0.0.1:5000
Running on http://172.30.0.1:5000
Press CTRL+C to quit
Starting with stat
bugger is active!
bugger PIN: 110-487-140
```

```

C:\Windows\System32\cmd.exe
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
The Service "flask-service" is invalid: metadata.name: Invalid value: "flask-service": a DNS-1035 label must consist of lower case alphanumeric characters or '-', start with an alphabetic character, and end with an alphanumeric character (e.g. "my-name", or "abc-123", regex used for validation is "[a-z]([-a-z0-9]*[a-z0-9])?")
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
error from server (AlreadyExists): services "flask-service" already exists
C:\Windows\system32>
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl proxy
Starting to serve on 127.0.0.1:8001
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
^C
C:\Windows\system32\kubectl -n kubernetes-dashboard get deploy
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl -n kubernetes-dashboard get pods
No resources found in kubernetes-dashboard namespace.
C:\Windows\system32\kubectl expose deployment flask-app --type=NodePort --name=flask-service
error from server (AlreadyExists): services "flask-service" already exists
C:\Windows\system32\kubectl get ing
NAME          CLASS    HOSTS      ADDRESS      PORTS      AGE
flask-app-ingress     *          *            80         27m
C:\Windows\system32\kubectl get svc
NAME          TYPE          CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE

```